I claim:

1. A clutch control system adapted for use on a vehicle having a frame and wheels and equipped with an engine selectively coupled through a clutch assembly to a manual transmission so as to drive the vehicle at selected speed, said clutch assembly having an enabled state wherein the engine and the transmission are coupled and a disabled state wherein the engine and the transmission are not coupled, said transmission including a plurality of gear states and including a gearshift lever movable among a plurality of gearshift positions each corresponding to a selected one of the gear states, said clutch control system comprising:

(A) a gearshift lever sensor mechanically coupled to said gearshift lever and operative to sense at least one of the gearshift positions corresponding to a selected one of the gear states and to produce a gear state signal indicative thereof;

(B) a monitor device operative to produce a speed signal indicative of the speed of the vehicle;

(C) a selectively actuable latch mechanism associated with said clutch assembly and having a unlock state that allows said clutch assembly to move from the disabled state to the enabled state and a lock state that prevents said clutch assembly from moving from the disabled state to the enabled state; and

(D) a controller operative in response to said gear state signal and said speed signal to place said latch mechanism in the lock state when the speed of the vehicle is above a pre-selected maximum speed for the selected one of the gear states.

2. A clutch control system according to claim 1 wherein said monitor device is operative to monitor rotational speed of at least one of a group consisting

of: a wheel of the vehicle, an axle of the vehicle, a drive shaft of the vehicle, an output of the transmission, an input of the transmission and a transmission gear.

3. A clutch control system according to claim 2 wherein said monitor device is a magnet mounted on the selected rotating component of the vehicle that is correlated to the speed of the vehicle and a Hall Effect sensor associated with said rotating component.

4. A clutch control system according to claim 1 wherein said vehicle includes a reciprocating clutch pedal linked to said clutch assembly and operative to move between a first position wherein said clutch assembly is in the enabled state and a second position wherein said clutch assembly is in the disabled state, said latch mechanism being associated with said clutch pedal and operative to move between a clutch pedal lock position wherein said clutch pedal is held in the second position and a clutch pedal release position wherein said clutch pedal may move from the second position to the first position.

5. A clutch control system according to claim 4 wherein said clutch pedal is supported by a reciprocating clutch pedal arm linked to said clutch assembly, said latch mechanism including a catch disposed on said clutch pedal arm and a latch bolt movable between an unlatch position defining the unlock state wherein said clutch pedal may move from the second position into the first position and a latch position defining the lock state wherein said latch bolt engages said catch thereby to prevent said clutch pedal from moving from the second position into the first position.

6. A clutch control system according to claim 5 wherein said catch is positionably adjustable relative to said clutch pedal arm.

7. A clutch control system according to claim 5 including a latch bolt support operative to mount said latch bolt relative to said vehicle.

8. A clutch control system according to claim 7 wherein said latch bolt is pivotally disposed on said latch bolt support such that said latch bolt pivots between the latch and unlatch positions.

9. A clutch control system according to claim 7 wherein said latch bolt support is movable relative to the vehicle whereby the position of said latch bolt relative to said clutch pedal may be adjusted.

10. A clutch control system according to claim 5 including a actuator operative to drive said latch bolt from the unlatch position to the latch position.

11. A clutch control system according to claim 10 wherein said latch bolt is biased into the unlatch position.

12. A clutch control system according to claim 5 including a solenoid drive operative to move said latch bolt from the unlatch position to the latch position.

13. A clutch control system according to claim 1 wherein said gearshift lever sensor is operative to sense a plurality of different gearshift positions and produce a respective gear state signal indicative thereof.

14. A clutch control system according to claim 1 wherein said gearshift lever sensor includes a gearshift follower engaging said gearshift lever and operative to follow the motion thereof and a position detector associated with said gearshift lever follower, said position detector operative to sense the gearshift position and generate the gear state signal corresponding thereto.

15. A clutch control system according to claim 14 wherein said position detector includes an optical encoder.

16. A clutch control system according to claim 15 wherein said optical encoder includes at least one light source, at least one light sensor and at least one code plate interposed between said light source and said light sensor, said code

plate having a transmission port coded to the gearshift position and operative to permit said light sensor to receive light from said light source when said gearshift lever moves into the gearshift position thereby to generate said gear state signal.

17. A clutch control system according to claim 16 wherein said gearshift lever sensor is operative to sense a plurality of different gearshift positions and produce a respective gear state signal indicative thereof, said optical encoder including an array of light sources and an array of light sensors with said code plate including a plurality of transmission ports corresponding to the plurality of different gearshift lever positions.

18. A clutch control system according to claim 17 wherein said gearshift lever moves in a plurality of gearshift planes and in a plurality of gearshift levels and including first and second code plates, said first code plate operative to determine the level of said gearshift lever and said second code plate operative to determine the plane of said gearshift lever.

19. A clutch control system according to claim 14 wherein said gearshift follower includes a first slide bracket having a pair of spaced-apart first arms for receipt of said gearshift lever therebetween such that said gearshift lever can reciprocate in a first direction between a plurality of shift levels while said first slide bracket remains stationary and a second slide bracket having a pair of spaced-apart second arms for receipt of said gearshift lever therebetween such that said gearshift lever can reciprocate in a second direction between a plurality of shift planes while said second slide bracket remains stationary, the first and second directions being orthogonal to one another.

20. A clutch control system according to claim 19 wherein said first slide bracket is biased toward a selected shift level and wherein said second slide bracket is biased toward a selected shift plane.

21. A clutch control system according to claim 1 including an analog-to-digital converter operative to receive the gear state signal and the speed signal.

22. A clutch control system according to claim 1 including an alarm associated with said controller and operative to display an alarm condition when said controller places said latch mechanism in the lock state.

23. A control system adapted for use on a vehicle having a frame and wheels and equipped with an engine selectively coupled through a clutch assembly to a manual transmission so as to drive the vehicle at selected speed, said clutch assembly having an enabled state wherein the engine and the transmission are coupled and a disabled state wherein the engine and the transmission are not coupled, said transmission including a plurality of gear states and including a gearshift lever movable among a plurality of gearshift positions each corresponding to a selected shift plane and a selected shift level each correlated to one of the gear states, said clutch control system comprising:

(A) a housing adapted to mount proximately to said gearshift lever;

(B) a gearshift follower supported by said housing and including a first slide bracket having a pair of spaced-apart first arms for engaging said gearshift lever therebetween and operative to follow the motion thereof such that said gearshift lever can reciprocate in a first direction between a plurality of shift levels while said first slide bracket remains stationary in a selected shift plane and a second slide bracket having a pair of spaced-apart second arms for engaging said gearshift lever therebetween and operative to follow the motion thereof such that said gearshift

lever can reciprocate in a second direction between a plurality of shift planes while said second slide bracket remains stationary in a selected shift level;

(C) a position detector supported by said housing and associated with said gearshift lever follower, said position detector operative to sense the gearshift position and generate a gear state signal corresponding thereto, said position detector including an encoder, a first code plate connected to said first slide bracket and cooperating with said encoder to produce a first position signal corresponding to the shift level of said gearshift lever and a second code plate connected to said second slide bracket and cooperating with said encoder to produce a second position signal corresponding to the shift plane of said gearshift lever, said first and second position signals defining the gear state signal;

(D) a monitor device operative to produce a speed signal indicative of the speed of the vehicle;

(E) a selectively actuable latch mechanism associated with said clutch assembly and having a unlock state that allows said clutch assembly to move from the disabled state to the enabled state and a lock state that prevents said clutch assembly from moving from the disabled state to the enabled state; and

(F) a controller operative in response to said gear state signal and said speed signal to place said latch mechanism in the lock state when the speed of the vehicle is above a pre-selected maximum speed for the selected one of the gear states.

24. A clutch control system according to claim 23 wherein said vehicle includes a reciprocating clutch pedal linked to said clutch assembly and operative to move between a first position wherein said clutch assembly is in the enabled state and a second position wherein said clutch assembly is in the disabled state, said

latch mechanism being associated with said clutch pedal and operative to move between a clutch pedal lock position wherein said clutch pedal is held in the second position and a clutch pedal release position wherein said clutch pedal may move from the second position to the first position.

25. A clutch control system according to claim 24 wherein said clutch pedal is supported by a reciprocating clutch pedal arm linked to said clutch assembly, said latch mechanism including a catch disposed on said clutch pedal arm and a latch bolt movable between an unlatch position defining the unlock state wherein said clutch pedal may move from the second position into the first position and a latch position defining the lock state wherein said latch bolt engages said catch thereby to prevent said clutch pedal from moving from the second position into the first position.

26. A clutch control system according to claim 25 wherein said catch is positionably adjustable relative to said clutch pedal arm.

27. A clutch control system according to claim 25 including a latch bolt support operative to mount said latch bolt relative to said vehicle.

28. A clutch control system according to claim 27 wherein said latch bolt is pivotally disposed on said latch bolt support such that said latch bolt pivots between the latch and unlatch positions.

29. A clutch control system according to claim 25 including a solenoid drive operative to move said latch bolt from the unlatch position to the latch position.

30. A clutch control system according to claim 23 wherein said first slide bracket is supported for sliding movement relative to said housing by a pair of spaced-apart first rails and wherein said second slide bracket is supported for sliding movement relative to said housing by a pair of spaced-apart second rails.

31. A clutch control system according to claim 23 wherein said encoder is an optical encoder supported by said housing and including array of light sources and an array of light sensors, said first and second code plates interposed between said array of light sources and said array of light sensors, said first and second code plate including a plurality of transmission ports.

32. A clutch control system according to claim 23 wherein said first slide bracket is biased toward a selected shift level and wherein said second slide bracket is biased toward a selected shift plane.

33. A clutch control system according to claim 23 including an alarm associated with said controller and operative to display an alarm condition when said controller places said latch mechanism in the lock state.

34. In a vehicle having a frame and wheels and equipped with an engine selectively coupled through a clutch assembly to a manual transmission so as to drive the vehicle at selected speed, said clutch assembly having an enabled state wherein the engine and the transmission are coupled and a disabled state wherein the engine and the transmission are not coupled, said transmission including a plurality of gear states and including a gearshift lever movable among a plurality of gearshift positions each corresponding to a selected one of the gear states, a method of controlling enablement of said clutch assembly comprising:

(A) setting a maximum speed for at least a selected one of said gear states;

(B) monitoring the selected speed of the vehicle;

(C) monitoring the gearshift position of said gearshift lever to determine the gear state of said transmission; and

(D) comparing the speed of the vehicle with the maximum speed for said selected one of said gear states when said clutch assembly is placed in the disabled state and said gearshift lever is thereafter moved into in the gearshift position that corresponds to the selected one of said gear states and thereafter either

(1) permitting said clutch assembly to move from the disabled state to the enabled state when the speed of the vehicle is no more than said maximum speed or

(2) preventing said clutch assembly from moving from the disabled state to the enabled state when the speed of the vehicle exceeds the maximum speed.

35. A method according to claim 34 including the step of setting a maximum speed for a plurality of selected gear states and the step of comparing the speed of the vehicle with the maximum speed for each of said plurality of gear states when said clutch assembly is placed in the disabled state and said gearshift lever is thereafter moved into in the gearshift position that corresponds to a respective one of said plurality of gear states and thereafter either

(1) permitting said clutch assembly to move from the disabled state to the enabled state when the speed of the vehicle is no more than said maximum speed or

(2) preventing said clutch assembly from moving from the disabled state to the enabled state when the speed of the vehicle exceeds the maximum speed.

36. A method according to claim 34 wherein the step of preventing said clutch assembly from moving form the disabled state to the enabled state is accomplished by mechanically locking said clutch assembly.

37. A method according to claim 36 wherein said vehicle includes a reciprocating clutch pedal supported by a reciprocating clutch pedal arm linked to said clutch assembly and operative to move between a first position wherein said clutch assembly is in the enabled state and a second position wherein said clutch assembly is in the disabled state, the step of preventing said clutch assembly from moving form the disabled state to the enabled state is accomplished by mechanically latching said clutch pedal in the second position.

38. A method according to claim 37 wherein the step of latching said clutch pedal in the second position is accomplished by latching the clutch pedal arm.

39. A method according to claim 34 wherein the step of monitoring the speed of the vehicle is accomplished by monitoring rotational speed of at least one of a group consisting of: a wheel of the vehicle, an axle of the vehicle, a drive shaft of the vehicle, an output of the transmission and an input of the transmission.

40. A method according to claim 34 wherein the step of setting the maximum speed is accomplished by storing shift data and speed data in a memory of a computer processor wherein said speed data is correlated to a maximum speed for the selected one of said gear states and wherein said shift data corresponds to the gear shift position corresponding to the selected one of said gear states.

41. A method according to claim 34 wherein the step of monitoring the gearshift position is accomplished by a position detector mechanically linked to said gearshift lever.

42. A method according to claim 41 wherein said position detector includes at least one code plate linked to said gearshift lever and an encoder operative to generate a gear state signal in response to a position of said code plate relative thereto.

43. A method according to claim 42 wherein said encoder is an optical device.

44. A method according to claim 34 wherein the step of monitoring the gearshift position is accomplished by first determining a gearshift plane for said gearshift lever and thereafter determining to which level within said gearshift plane said gearshift lever is moved.